INTERRELATIONSHIPS BETWEEN MEASURES OF PERSONAL-SOCIAL ADJUSTMENT AND MEASURES OF IMPROVEMENT IN A HOSPITAL SETTING

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INTERRELATIONSHIPS BETWEEN MEASURES OF PERSONAL-SOCIAL ADJUSTMENT AND MEASURES OF IMPROVEMENT IN A HOSPITAL SETTING

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CHAPTER I

PRESENTATION OF THE PROBLEM

Introduction

The rapid increase in the use of group therapy with mental patients and the emphasis placed on the hospital milieu in the past twenty years have greatly increased the need for understanding the interpersonal relationships of patients in mental hospitals. While the psychiatrist may use social adjustment—the ability to establish and maintain satisfying relationships with others—as one criterion of progress, he is only vaguely aware of how his patient affects and is affected by the social network into which he is suddenly enmeshed when he enters the hospital. This situation, coupled with the trend toward the ward becoming the locus of treatment (2), greatly increases the need to study the social network of the mental hospital. The "therapeutic community" movement which stresses the importance of the interactions of hospital patients increases the need for sociometric and observational studies of these populations if we are to understand the extent to which social recovery affects the patients' movement toward better overall adjustment.

The use of sociometric techniques to assist in determining the social recovery of the patient and time of discharge was suggested over twenty years ago by Hyde and
York (5) and again in 1964 by Dolezal and Hausner (4). However, sociometry has not been widely used in spite of increased attention to the hospital milieu and in spite of claims that the social environment fostered by the hospital affects the course of the patients' illness and his recovery. More evidence supporting the use of sociometry in a clinical setting is needed if it is to be effectively used in evaluating the milieu approach to treatment and the effect of therapy groups upon recovery.

**Purpose of the Study**

The purposes of this study were (1) to explore the possibility that sociometry can be a valuable prognostic method in milieu therapy, and (2) to investigate the validity of the "Draw-a-Group" (DAG) projective technique for measuring interpersonal responsiveness.

**Explanation of Terms**

When referred to in this study, sociometry means a method used for the discovery and manipulation of social configurations by measuring the attractions and repulsions between individuals in a group.

A sociometric test is one which attempts to determine the feelings of individuals towards each other and, second, to determine these in respect to the same criterion.

Choice-status is the psycho-social position of the individual in a community (or other setting). It is measured
by the extent of positive and negative choice expression focused upon an individual by the members of the population.

The **social atom** evolves as an interpersonal structure from the birth level onward. As the individual projects his emotions into the groups around him, and as the members of these groups in turn project their emotions toward him, a pattern of attractions and repulsions, as projected from both sides, can be discerned. This pattern is called the social atom. The interlocking of a number of social atoms constitutes a **network**.

**Tele** is the feeling projected within the social atom and through the network or networks. Tele is an abstraction and has no social existence by itself. It has to be comprehended as a process within a social atom.

**Sociotele**, a goal-oriented process, differs from **psychetele**, which has no specific goals, in several ways. First, sociotele is a work-oriented process with objectives which can be influenced by money, property, or gifts. Whereas a socio-group process is engaged in producing something, the worth of a psyche-group relationship resides in the interpersonal processes of which it is composed. Second, in a sociotele relationship instructive and corrective efforts are common. In a psychetele relationship these efforts are threatening and can only occur where both parties involved want it and accept it. Third, it is common for performance in socio-group roles to become conscious while
spontaneity is one of the essential components of a successful psyche-group process. Fourth, in a socio-group experience close contact may be required even if the persons do not know or like each other. A psyche-group relationship can never be forced. Fifth, in a socio-group relationship members may be critical of weaknesses in others which interfere with the functioning of the group whereas in a psyche-group relationship the members are tolerant and accepting of each others' faults. Sixth, whereas an individual in a socio-group situation may help others from a sense of duty or pity, a psyche-group relationship can never be based on duty, obligation, sympathy, or feeling sorry for someone.

The "Draw-a-Group" is a projective technique for measuring interpersonal responsiveness. It is a form of drawing analysis based on the drawing of a group made by each subject in a tested population. Interpersonal responsiveness was defined by Cookerly as "the degree to which a person can successfully respond to others in many and varied situations, thus causing others to increase their positive responsiveness to, or acceptance of, that person" (3).

Symptom severity was defined as the extent to which a person is incapacitated by such indicators of psychopathology as behavioral immaturity, emotional instability, feelings of inadequacy, nervousness, compulsive behavior, etc. No attempt was made to compile a comprehensive list of symptoms.
Mental health status was defined as the score received by each subject on a rating scale which included such items as adequate outlook and goals, ability to form close emotional bonds, effectiveness in dealing with others, social participation, satisfying work and recreation, etc. No attempt was made to compile a comprehensive list of psychologically healthy attributes.

Hypotheses and Assumptions

It was hypothesized that sociometric choice-status would (1) be positively correlated with mental health status, (2) be inversely related to symptom severity, and (3) correlate positively with the "Draw-a-Group" technique.

It was assumed that sociometric status is a valid measure of interpersonal responsiveness, as Bonney states: "It (the sociometric test) is a measure of person-to-person responsiveness in which each group member renders a judgement in regard to the desirability or undesirability of certain other members for a specific purpose, activity, or relationship" (1). It was assumed that sociometric tests measure subjective rather than objective facts and that preferences are subjective facts. It was also assumed that a sociometric test measures the choice-status of members of a group on a stated criterion at a particular time and place. Another sociometric assumption is that within all formal organizations there is an informal, interpersonal
organization which greatly affects the functioning of the formal organization and this informal organization can be measured and quantitatively described. It was further assumed that all psychological groups are characterized by a hierarchy of status and that all group structures can be changed by appropriate efforts.

It is often observed that whatever the basic disturbance or diagnostic category is, one of the principal reasons people are admitted to a mental hospital is because of their inability to establish and maintain adequate relationships with people in the community, at work, and/or at home. It was assumed that dismissal depended on the increased ability to effectively interact with others and it was expected that dismissal would be accompanied by increased status on sociometric tests, improved ratings on mental health status and symptom severity, and improved scores on the "Draw-a-Group" technique. It is therefore considered important to study the individual and his social environment simultaneously (6).


CHAPTER II

RELATED RESEARCH

While the use of sociometric techniques as prognostic tools has long been advocated the amount of sociometric research in clinical settings is not sufficiently convincing to elicit widespread use of the technique. Most studies show moderate correlations between sociometric data and good overall adjustment but many of the problems unique to a study of hospitalized mental patients have not been adequately explored.

In *Who Shall Survive?* Moreno implied that low choice status or high rejection status was evidence that the overall adjustment was poor (16). Some support for this concept was reported by Blumenthal in a study of outpatient schizophrenics in which the subjects were rated on their overall level of adjustment and level of interpersonal relations by a professional staff (2). His main finding showed a moderate relationship between adjustment and sociometric choices. He suggested that adjustment indices alone could not account for all of the patients' choice behavior, therefore several measures, including adjustment indices, were used in the present study.
Data from sociometric and scaling techniques were also used in a military squad and the data indicated that deviants occupied lower sociometric positions than did a control group (1). Further support for the relationship between sociometric status and overall adjustment was reported by Kuhlen and Bretsch (13), who compared the sociometric status and personal problems of almost 700 ninth graders. They found that those who were least accepted by their classmates (roughly the bottom quartile) had reliably more problems than did the top quartile in sociometric status. Also studying the differences between socially successful and socially unsuccessful children in a school setting, Bonney (3) concluded that the winning of friends is the result of a good general development and preparation for all the problems of life. While the above studies support the concept of a positive relationship between choice-status and good adjustment, they do not support the idea that sociometry could be useful as a prognostic tool in a hospital population.

Since a portion of this study was designed to explore the relationship between sociometric status and a newly developed projective drawing technique, an attempt was made to find studies relating sociometric status and projective techniques. Lindzey and Goldwyn compared sociometrically high and low subjects on stories from the Thematic Apperception Test (14). The ratings were designed to measure anxiety and aggression and were not related to sociometric
status. The lack of correlation between sociometric choice status and aggression was also noted by Bonney in his study of behavior differences between sociometrically high and low children (4). Using the Rorschach projective technique, Northway and Wigdor found that school children who were sociometrically high were characterized by greater ability to sense the feelings of others and a conscious striving for the approval of others than sociometrically low students (18). The low students showed less ability to control their emotions and seemed more egocentric, moody, and impulsive than the highs. A statistical comparison of the data was not feasible because of the difficulties involved in quantifying Rorschach interpretations. In contrast to the preceding studies, Cookerly found a high correlation between sociometric data and the experimental "Draw-a-Group" projective technique (6). This would be expected since both techniques attempt to measure interpersonal responsiveness, whereas other projective techniques are more oriented toward intrapsychic phenomena. Because the "Draw-a-Group" is more amenable to objective scoring and quantification than are most projective techniques, it was considered worthwhile to explore the validity of this new technique.

While the above studies support the use of sociometric tests in determining the level of adjustment and interpersonal responsiveness, they are not directly related to the main concern of this study, namely a clinical or hospital
population. In a non-sociometric study of inferiority feelings and life style Eisenman (9) found evidence to support the idea that patients withdraw because of inferiority feelings. He suggested that psychopathology is related to difficulties in interpersonal relationships. In a later study comparing sociometric choices of patients against diagnostic labels he found that number of choices made and percent of reciprocal choices made were significantly lower on the chronic ward (10). This finding suggested that disturbed social relationships were related to more severe psychopathology. Also testing the hypothesis that an increase in withdrawal is associated with an increase in mental illness, McMillan and Silverburg (15) compared sociometric choices on five hospital wards: (1) neurological, (2) gastrointestinal medicine, (3) open psychiatric (neurotics and psychotics), (4) insulin therapy (anxiety neurotics), and (5) closed psychiatric. They found limited support for the hypothesis in spite of a good deal of overlap of disturbance among the wards. In a similar study Murray and Cohen (17) compared sociometric choices on three hospital wards: (1) control-medical, (2) open psychiatric, (3) locked psychiatric. They concluded that social organization decreased as degree of mental illness increased. Because of the amount of overlap of degree of disturbance among wards and discrepancies in the use of diagnostic categories, it was decided to disregard these rather arbitrary classifications
and to compare sociometric choices with judged degree of disturbance.

Testing hypotheses which are very similar to those of the present study, Brown (5) analyzed preferences of patients on a psychiatric ward and provided statistical support for the hypotheses that (1) the degree to which a patient's positive choices are reciprocated is inversely related to the relative degree of illness; and (2) sociometric rank is inversely related to judged degree of the illness of the patient. One major difference between Brown's study and this one was that in Brown's study patients' judgments of relative illness were related to their interpersonal choices, whereas in the present study nurses' and psychiatrists' judgments of mental illness were related to the patients' interpersonal choices.

In a study similar in purpose to Brown's research and in design to this study, Dolezal and Hausner (8) compared the changes in neuroticism and life dissatisfaction with the sociometric changes of twenty-five patients observed in the course of their treatment. The period of time reviewed—which included four investigations—was divided into two periods of fourteen days each which were intercorrelated. The results obtained which related to this study were

1. Changes in neuroticism were correlated with changes in the rating order.
2. There was no significant relationship between therapeutic effect and the sociometric position of the patient at the beginning of his treatment.
3. The sociometric dynamics in the course of time show over-compensation, i.e. a counter-deviation toward the opposite pole of the sociometric position.

In an analysis of these results the authors conclude that

1. The sociometric dynamics within a therapeutic group should be evaluated as a reflection of the experience of the individual within the group.
2. The more extensive the sociometric movement shown by an individual, the larger were the changes in his symptoms.
3. Sociometric tests repeated several times during the patients' stay help the therapist forecast the improvement of the patient.
4. Sociometry in the therapeutic community may be a valuable diagnostic and prognostic method when used for the purpose of altering the structure and dynamics of the group.

While the above study is appropriate to the problem, the number of subjects was so small that one cannot very safely generalize from the conclusions. By repeating the investigation eight times, the present study constituted an attempt to overcome this problem.

During a sociometric study of a mental hospital community, Schauer (19) arrived at approximately the same conclusions as Dolezal and Hausner. Schauer checked the results of sociometric testing against those obtained by observation, psychiatric interview, and psychodramatic tests. He suggested that a sociometric approach be further validated and used as an index of social adjustment of a person in psychological and psychiatric evaluation. Although Schauer's recommendation was based on observation, and no statistical data were reported his suggestion merits serious consideration.
Gilliland and Sommer (12) attempted to determine whether sociograms would be useful to the nursing and clinical staff in assessing the ward's social structure and in evaluating individual cases. Six sociometric surveys were completed, one every four weeks. It was found that dischargees who stayed long enough for two sociograms had in general increased their relationships. However, the study was designed to study the relationship between social structure and diagnostic groups rather than between social structure and level of adjustment or mental health status, as in the present study. Gilliland and Sommer's sociometric test consisted of asking the patients to name their friends on the ward. In the present study the sociometric tests were based on a specific criterion which is considered appropriate for the setting. The form used in the present study is considered more meaningful for the patient.

In an experiment concerned with reducing the recidivism rate, Fairweather (11) found only one of the within-hospital measures, cooperative behavior in group, to be significantly related to the criterion. He suggested the use of cluster analysis to study the interpersonal relationship structure among individuals. It would appear that cooperative behavior in group would be closely related to interpersonal responsiveness. It would therefore seem that measures of interpersonal responsiveness would be related to lower recidivism and better mental health status. The present study should help
clarify why lower recidivism and cooperative group behavior are related.

Cressler (7) used a "Social Preference Photo Technique" to measure interpersonal choice. A continuously current group of pictures was compiled by taking each patient's photograph soon after his entry to the ward. These pictures were presented to each patient along with eight questions of increasing social intimacy, when he entered and left the program. Cressler hypothesized that the small-group treatment program would show a significantly greater rate of choice than the traditional ward and that least chronic patients would show higher choice rates than most chronic groups of patients. He concluded that the small-group ward climate had an overwhelmingly greater impact upon interpersonal choices. He found no differences in interpersonal choice behavior owing to varying degrees of chronicity.

Cluster analyses were performed on the sociometric scores and Cressler suggested the existence of a three-level scale of social attraction, in terms of quantity of interpersonal choice. The "Social Preference Photo Technique" was considered to be an improvement over the traditional written form of sociometric test which was used in the current study, because it enables the subject to react to people before he learns their names. While Cressler's study supports the concept of a small-group treatment program he does not relate interpersonal choice behavior to mental health except
on the criterion of chronicity. The present study attempted to relate the two but used a much broader concept of mental health.

It is apparent that studying interpersonal responsiveness is much more complex than it appears on the surface. While most of the studies support the relationship between interpersonal responsiveness, as measured sociometrically, and good mental health, the correlations are generally low to moderate. Most of the studies conducted in a clinical setting are concerned with diagnostic categories or judge mental health on a single criterion. This study attempts to cut across the diagnostic categories usually encountered in hospital studies and explore the relationship between sociometric choice status and mental health without judging mental health on one criterion.

The experimental "Draw-a-Group" appears to be successful in measuring interpersonal responsiveness where other projective techniques have failed. It is quickly and easily administered and scored and was considered worthy of further exploration for possible clinical uses.
CHAPTER BIBLIOGRAPHY


CHAPTER III

METHODS AND PROCEDURES

Subjects

There were 62 subjects in this investigation, 13 of them being male and 49 female. The ages ranged from 13 years to 59 years, with a mean age of 34 years. Twenty-six of the subjects were included in the study more than once owing to the chronic nature of their illnesses. Thus the total number of subjects in the eight groups was 104. Approximately 50 per cent of the subjects were in the lower-middle socio-economic class, with the remainder being about equally divided between the upper-lower and the upper-middle classes. Socio-economic level was assessed by income and place of residence. Thirty-five of the subjects were placed in the diagnostic category of depressive reaction, seven as schizophrenic reaction, three as adolescent adjustment reaction, five as anxiety reaction, two as conversion reaction, eight as alcohol abuse, and two as drug abuse. The subjects' average hospitalization time was sixteen days, as compared to fourteen days for the entire hospital population during the same period. The recidivism rate of the subjects was 35 per cent, as compared to 25 per cent for the total hospital population during the same period of time.
An attempt was made to include the entire hospital population in the study but some patients were too ill to participate and others refused. As a result, 75 per cent of the hospital population was included in the investigation.

All of the subjects were patients in the Fort Worth Neuropsychiatric Center and Hospital, which is a twenty-six-bed, private, open-ward facility serving all races and both sexes. The milieu and group therapy program may best be described as short-term, intensive care, designed to return the patient to his previous environment as soon as possible. Each patient is seen daily in his room by a psychiatrist but none of them have regularly scheduled appointments with the doctor until their dismissal. Every patient is seen for approximately three hours per week by an intern psychologist in individual counseling sessions. About 40 per cent of the patients receive unilateral electro-convulsive therapy, which, in some cases, improves the memory of depressed patients (1). The treatments are given three times a week, with six to ten treatments being the average. Occasionally bilateral electro-convulsive therapy or indoklon convulsive therapy is given to a patient, but these are used only in extreme cases. Most of the patients receive psychotropics drugs, of which the most frequently used are major and minor tranquilizers and antidepressants. The treatment program is highly individualized so as to give the most effective care for a given individual.
All of the patients are encouraged to participate in daily one-hour group therapy sessions of different types. In-patient group psychotherapy places emphasis on the short-term goal of reducing currently painful or distressing problems. This session is led by the chief psychologist, who is assisted by a master's-degree-level student of psychology. The sessions are work-oriented, with the primary job of each patient being to get well and to help others get well. The patient's responsibility for getting well is emphasized, as well as his responsibility to help others get well. The therapists usually refuse to take the "leader" role, and interaction among the patients is encouraged. They usually become quickly involved, relate their personal problems, and ask for suggestions from the group. Suggestions are frequently offered by several group members, and if met with too much resistance, the patient is likely to be told he is not really trying. Honesty with kindness is encouraged. The sociometric data are often used to introduce a topic to the group. One week the sociograms indicated that a teenage boy was severely rejected, while the nurses reported that the other patients were superficially polite to him. When it was pointed out that this type of behavior aggravated his illness, the boy and the other patients worked out more honest and helpful approaches to each other. His improvement was noted on all five measures used in this study.
In role therapy patients are encouraged to act out various roles in order to better meet the role requirements of the social and interpersonal world. These sessions are problem-oriented and usually deal with the interpersonal relationships of one of the patients. A student psychologist directs the sessions and encourages the patients to help each other realize the nature of their problems. The patient participation in this type of therapy is rather sporadic, sometimes being very good and sometimes being rather perfunctory. One exceptionally good group experience occurred when a middle-aged father acted out his problems of dealing with a headstrong stepdaughter. He chose a girl who acted much like his daughter to play her part. They were so involved that the girl was stamping and screaming at one point that he couldn't even hear what she said because he had already made up his mind. After the session was over the man repeatedly thanked the girl for helping him understand himself and his stepdaughter better. Changes in his responses to the "Draw-a-Group" (drawings E-13 and G-18) may be seen in the Appendix.

Educative group therapy is led by the chief psychologist and has as its goal giving to patients the psychological "thought tools" with which to work on their problems. The sessions begin with a short, instructive talk by the psychologist, which is followed by questions and discussion. There is little patient interaction, but patients participate
enthusiastically in the discussions and often suggest a
topic for the next session.

One therapy session is devoted to letting the patients
complain about any aspect of the treatment program, hospital
procedures, personnel, etc., making suggestions for improve-
ment, and planning a weekly trip, such as attending a movie,
going bowling, picnicking, etc. The patients participate
very well in these sessions because their suggestions are
put into effect whenever possible.

Occupational therapy is available from 10:00 A.M. to
3:00 P.M. and is directed by a staff psychologist. Various
types of handicrafts are available and the patients are
allowed to choose their own projects. Occupational therapy
is enthusiastically welcomed by the female patients but the
male patients often request more vigorous physical activities.

The nurses on the evening shift play table games with
the patients and encourage informal conversations. They
also help the patients plan surprise birthday parties for
other patients. The patients sometimes decide to use their
occupational therapy projects as bingo prizes, and the entire
ward, staff included, gathers in the dining room to pop corn,
drink soft drinks, and play bingo. The patients consistently
say these informal activities are one of the most signifi-
cant aspects of their recovery.
Description of the Instruments and Procedure

Since most hospital dismissals occurred on Fridays and Saturdays, the sociometric questions were given to the patients on Thursdays, when it was assumed there was a greater level of acquaintance volume. The patients were told that the information they gave was confidential and would be used to form therapy groups and plan ward activities. The subjects were instructed to name the patients they would most like to sit with at meals and the ones they would least like to sit with at meals. They were also asked to name the patients they would most like to be with in group therapy to work on personal problems and the persons they would least like to be with in group therapy. They were allowed to name as many or as few as they desired. A copy of the sociometric questionnaire used may be found in the Appendix.

The following procedure was used in administering the "Draw-a-Group" technique. As each subject completed the sociometric questionnaire he was given a sheet of blank white paper, eight and one-half by eleven inches, and a number two sharpened pencil with an eraser. The following statement was then made to the subject, "Please draw a group of people." Questions asked by the subject such as how many people should be drawn, what should they be doing, etc., were answered with, "It is your drawing. You may do it however you wish." Statements which indicated concern over
artistic ability were answered with, "How good an artist you are doesn't matter at all. Just do it your own way and that will be quite good enough."

The pictures were then scored by three clinical psychologists working independently. They evaluated the pictures according to the following system:

- 5 points—very high in interpersonal responsiveness
- 4 points—high in interpersonal responsiveness
- 3 points—average in interpersonal responsiveness
- 2 points—low in interpersonal responsiveness
- 1 point—very low in interpersonal responsiveness.

The detailed principles of evaluation used by the judges may be found in Cookerly's unpublished master's thesis (2). They are summarized as follows:

**Degree of interaction.**—Drawings in which informal conversation appears to be occurring are usually rated over those in which conversation is supported by other activities such as playing cards. Drawings in which conversation is supported by activity are rated over scenes in which conversation appears to be incidental to what is going on. When human figures are drawn facing each other a higher degree of interaction is indicated. Those scenes in which all persons are facing the same direction are rated very low.

**Degree of role structure.**—Scenes in which the role requirement is flexible or informal are rated over those in
which the role requirements are more rigid or formal. Drawings in which no role requirements are evident are rated lowest of all. Social or recreational scenes are rated over those of a work situation.

**Richness of content.**--Pictures having more detail, greater differentiation in age, dress, size, and sex are generally rated higher than those which exhibit a hollow body outline, sexless quality, lack of clothing, hair or other details. Pictures in which only the faces are shown are rated lower than those showing the entire body.

**Facial and postural expression.**--Human figures shown in rigid or stiff positions are ranked lower than those of a more natural posture. Pictures of people sitting are ranked over those of people standing, except when the people are shown sitting in rows. Pictures of people sitting in rows are ranked lower than pictures which show the figures in almost any other position. Pictures showing greater facial expressions are ranked high except where everyone has a similar smile. Variety of expression raises the rank of the drawing.

**Number and type of human figures.**--Scenes which include very few or very many human figures are ranked very low. Pictures showing more than one sex rank over one-sex pictures, which rank over pictures where the sex is indeterminable. Same-age drawings rank above those of varying ages, which in
turn are ranked above those showing a dominant figure with obviously younger figures. Drawings in which age is indistinguishable are rated lower than those in which age is distinguishable.

Graphic and structural indicators.—Figures which are very small or very large are usually ranked in the lower categories. Centered pictures are ranked over those drawn in corners, with the exception of those in the upper left hand corner, which are sometimes highly ranked. Pictures drawn with light sketchy marks and those with exceptionally heavy lines are ranked lower than others. Pictures that have a symmetrical quality are ranked over those that appear out of balance. Indications of good perspective, proper size relationships, and quality of depth increase the status of the drawing.

Samples of drawings in the various categories may be found in the Appendix.

Symptom severity was evaluated by one nurse from each shift and the patient's psychiatrist, all working independently. Symptom severity was evaluated for each patient every Thursday according to the following scale:

1---slight,
2---mild,
3---moderate,
4---considerable,
5---extreme.
A copy of the instructions given to the judges may be found in the Appendix. No verbal instructions were given except to ask them to make their evaluations independently.

Mental health status was evaluated for each patient for eight consecutive Thursdays by the attending psychiatrist. The following scale was used:

1--poor,
2--fair,
3--moderate,
4--good,
5--very good.

A copy of the instructions given to the doctors may be found in the Appendix. No verbal instructions were given except to ask for their cooperation in evaluating the patients for research purposes.

All subjects on whom scores were obtained from all five measures were included in the study. Psychetele and sociotele scores were obtained for each subject by allowing one point for each positive choice, two points for each mutual choice, and subtracting one point for each negative choice. These scores were then ranked, as were the raw scores on mental health status. Since there was more than one judge on the symptom severity scale and the "Draw-a-Group," these scores were averaged and then ranked. All possible correlations of these five measures were then computed. Since the use of a control group in this design was not
feasible, the study was repeated at one-week intervals for a total period of eight weeks (3, 4). An analysis of variance was computed using the admission and dismissal scores of the twenty-six subjects who were included in the study more than once.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

RESULTS AND DISCUSSION

Testing of the Hypotheses

In Chapter I it was hypothesized that (1) sociometric choice-status would be positively correlated with mental health status, (2) sociometric choice-status would be inversely related to symptom severity, and (3) sociometric choice status would correlate positively with the "Draw-a-Group" projective technique. Samples of the sociometric questionnaire, mental health rating scale, symptom severity rating scale, and the drawings are given in the Appendix.

The sociometric choice-status for each subject was obtained as described in Chapter III, placed in rank order and correlated with mental health status using the rank-order correlation. The data for the eight weeks were then averaged, yielding a mean correlation between the two sociometric measures and mental health status. The data are summarized in Table I.

These figures are interpreted as supporting the hypothesis that sociometric choice-status would be positively correlated with mental health status, although the correlation between sociotele choice-status and mental health status was not significant. Close inspection of the data revealed that
TABLE I
CORRELATIONS BETWEEN SOCIOMETRIC CHOICE-STATUS AND MENTAL HEALTH STATUS

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<th>N</th>
<th>Psychetele Coefficient of Correlation</th>
<th>Sociotele Coefficient of Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>.61</td>
<td>.58</td>
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<td>.09</td>
<td>.15</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>.68*</td>
<td>.31</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>.51</td>
<td>.38</td>
</tr>
<tr>
<td>5</td>
<td>18</td>
<td>.47*</td>
<td>.45</td>
</tr>
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<td>6</td>
<td>5</td>
<td>.42</td>
<td>.82</td>
</tr>
<tr>
<td>7</td>
<td>19</td>
<td>.54*</td>
<td>.17</td>
</tr>
<tr>
<td>8</td>
<td>17</td>
<td>-.02</td>
<td>-.13</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>.41*</td>
<td>.34</td>
</tr>
</tbody>
</table>

*Significant at 5% level.

there were ties in scores and on ranks involving twelve of the fifteen subjects in the second week on the mental health status. In the eighth week all of the subjects were involved in ties in ranks on the mental health status. It is the opinion of the experimenter that if the scale for mental health status had been more differentiated, these numerous ties would not have occurred and the correlation between mental health status and sociotele choice-status would probably have been slightly higher. It seems likely that the mental health scale would be improved by following a multiple criterion approach to the evaluation of mental health status (3). The criterion included such dimensions
as (1) active involvement with the environment, (2) admission of personal problems, (3) spontaneity, (4) flexibility, (5) expression of affect, (6) self-other orientation, (7) openness to experience, (8) close interpersonal relationships, (9) autonomy, and (10) anticipation of outcomes. The multiple criterion approach appears to be an effective method for the study of mental health and would appear to make the results of future research in this area more relevant to the problems of evaluating degree of psychopathology and measurement of improvement.

To test the reliability of the measures of symptom severity, the separate evaluations made by the judges were correlated using the Pearson product-moment coefficient of correlation (4, 5). The coefficient of correlation between the evaluations of judges A and C was .71, between judges A and D it was .59, between judges B and C it was .14, between judges B and D the correlation was .22, between C and D it was .62. The mean of these correlations is .46. These figures were interpreted as meaning that there was adequate inter-rater reliability for the purposes of this study.

The judges' ratings for each subject were averaged to give a mean judgment of each subject's estimated degree of symptom severity. These scores were then ranked and correlated with sociometric choice-status using the rank order coefficient of correlation. Table II summarizes these findings.
TABLE II
CORRELATIONS BETWEEN SOCIOMETRIC CHOICE-STATUS AND JUDGED DEGREE OF SYMPTOM SEVERITY

<table>
<thead>
<tr>
<th>Week</th>
<th>N</th>
<th>Psychotele Coefficient of Correlation</th>
<th>Sociotele Coefficient of Correlation</th>
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<td>.28</td>
<td>.21</td>
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<tr>
<td>2</td>
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<td>-.65*</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>-.52</td>
<td>.22</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>-.70*</td>
<td>-.38</td>
</tr>
<tr>
<td>5</td>
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<td>.05</td>
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<tr>
<td>8</td>
<td>17</td>
<td>-.02</td>
<td>.48*</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>-.12</td>
<td>-.04</td>
</tr>
</tbody>
</table>

*Significant at 5%.

The data did not support the hypothesis that sociometric choice-status is inversely related to symptom severity, although the trend was in the predicted direction. The variability of the correlations between symptom severity and sociotele (from .48 to -.65) may be partially explained by the milieu setting in which the study occurred. It is possible that the philosophy of the milieu treatment program, in which the patient is regarded as being constantly engaged in the work of getting well, was sometimes so pervasive that it inhibited their rejecting other patients as members of a therapy group. Although Brown found a significant negative correlation between degree of illness and the degree to
which patients were regarded as desirable members of a therapy group, she noted that it appeared to be more relevant than the subjects indicated (1). It may also be noted that in some cases the behavior which helped a patient gain choice-status was considered a symptom by the judges. Two cases illustrate this type of behavior. One woman constantly gave home-canned food and home-made sweets to the other patients. Another woman encouraged others to talk about their problems and was considered very interested and helpful by the other patients, but she steadfastly refused to discuss her own problems. There were several instances when a patient who was loud and disruptive at night was totally rejected by the group on both sociometric measures.

To test the reliability of the "Draw-a-Group" described in Chapter III, separate sets of picture evaluations made by the three judges were correlated using the Pearson product-moment coefficient correlation (3, 4). The coefficient of correlation between the evaluations of judges A and B was .62, between the evaluations of judges A and C it was .66, and between the evaluations of judges B and C the correlation was .80. The mean of these correlations was .69. These figures are interpreted as meaning that there is a substantial relationship between the judges' separate evaluations of the drawings and that for this stage of test development sufficient reliability does exist.
To test the validity of the "Draw-a-Group," the three numerical evaluations for each drawing were averaged to give a mean judgment of each subject's estimated degree of interpersonal responsiveness. These means were then placed in rank order and correlated with the sociometric data using the rank order coefficient of correlation. The data for the eight weeks were then averaged to find the mean correlation. Table III summarizes these findings.

TABLE III

CORRELATIONS BETWEEN SOCIOMETRIC CHOICE-STATUS AND THE DRAW-A-GROUP PROJECTIVE TECHNIQUE

<table>
<thead>
<tr>
<th>Week</th>
<th>N</th>
<th>Psychetele</th>
<th>Sociotele</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Coefficient of Correlation</td>
<td>Coefficient of Correlation</td>
</tr>
<tr>
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<td>.49</td>
</tr>
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<td>.05</td>
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<tr>
<td>3</td>
<td>10</td>
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<td>-.13</td>
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<td>17</td>
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<td>.08</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>.09</td>
<td>.04</td>
</tr>
</tbody>
</table>

Contradictory to Cookerly's results (2), the data do not support the hypothesis that sociometric choice-status would correlate positively with the "Draw-a-Group" projective technique. Cookerly's groups consisted of a Preteen Club,
a Civil Air Patrol squadron, a social and career club, an adult couples church school class, and a Golden Fellowship group. All of these subjects must be considered "normal," as contrasted with the clinical population used in this study. Additional data gathered in this study indicated that the "Draw-a-Group" projective technique was significantly correlated with mental health status but not with symptom severity. These data are summarized in Table IV.

**TABLE IV**

CORRELATIONS BETWEEN THE DRAW-A-GROUP PROJECTIVE TECHNIQUE, MENTAL HEALTH STATUS, AND SYMPTOM SEVERITY

<table>
<thead>
<tr>
<th>Week</th>
<th>N</th>
<th>Mental Health Status</th>
<th>Symptom Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Coefficient of Correlation</td>
<td>Coefficient of Correlation</td>
</tr>
<tr>
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<td>.10</td>
<td>.58</td>
<td>-.02</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>.87**</td>
<td>-.14</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>.46</td>
<td>.08</td>
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<td>.15</td>
<td>.00</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>.38*</td>
<td>.01</td>
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</table>

*Significant at 5% level.

**Significant at 1% level.

While doubt is cast on the "Draw-a-Group" as a measure of interpersonal responsiveness, it is considered worthy of
further investigation as a measure of mental health which is independent of symptoms.

Additional Data

The mean, standard deviation, and t values were computed on the scores of the twenty-six patients who were included in the study more than once. As shown in Table V, symptom severity is the only measure on which there was significant improvement. The substantial reduction in symptom severity is very likely due to the short-term, intensive-care, milieu approach to treatment, but in the absence of a control group one can only speculate.

The lack of change in the mental health status may reflect prejudice on the part of the psychiatrists, who both told the experimenter that changes in mental health status

<table>
<thead>
<tr>
<th>Test or Scale</th>
<th>Admission</th>
<th>Dismissal</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Deviation</td>
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<tr>
<td>Symptom Severity</td>
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<td>.90</td>
</tr>
<tr>
<td>Mental Health Status</td>
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</tr>
<tr>
<td>Draw-A-Group</td>
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<tr>
<td>Psychetele</td>
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<td>3.04</td>
</tr>
<tr>
<td>Sociotele</td>
<td>1.12</td>
<td>2.56</td>
</tr>
</tbody>
</table>

*Significant at .01 level.
were not expected while a patient was hospitalized. Changes in the mental health rating scale as suggested earlier in this chapter should help eliminate the factor of possible bias. The absence of improvement on the "Draw-a-Group" scores is consistent with the lack of change in the mental health status, since these two measures correlate significantly.

Changes on the sociometric measures, while not significant, are in the desired direction and are compatible with the postulated inverse relationship to symptom severity.

The correlation coefficient between the sociotele and the psychetele was .68, which is significant at the 1 percent level. Several factors may be responsible for this correlation, which is not unusually high in view of the fact that the work involved is not very specialized. In an attempt to gather the sociometric data when the acquaintance level was highest, the questions were administered on Thursdays because most of the dismissals are on Friday and Saturday. Patients expecting to be discharged the next day were probably not as discriminating as they otherwise would have been. Also, the philosophy that one is constantly engaged in the work of getting well, through informal interaction with other patients as well as through therapy groups, might have prevented any distinction between play and work groups within the ward setting.

Although the trend was in the expected direction, the correlation coefficient between symptom severity and mental
health status was -.33, which is not significant. Since mental health status is a more general and comprehensive concept, as compared to symptom severity, which is relatively more specific, higher correlations would not be expected.

In summary, it has been found that sociometric choice-status is positively correlated with mental health status in a group of hospitalized psychiatric patients. The data indicate no correlation between sociometric choice-status and symptom severity, although an inverse relationship was postulated. The experimental "Draw-a-Group" projective technique does not correlate with sociometric choice-status but has been found to be significantly correlated with mental health status. It has been suggested that further research be conducted to determine the validity and possible uses of the "Draw-a-Group" projective technique as a valuable psychological tool.


CHAPTER V

SUMMARY

The purpose of this study was to explore the relationships between measures of personal-social adjustment and measures of improvement in a hospital setting.

It was hypothesized that sociometric status would (1) be positively correlated with mental health status, (2) be inversely related to symptom severity, and (3) correlate positively with the "Draw-a-Group" projective technique.

Hospitalized psychiatric patients were judged on measures of mental health status, symptom severity, sociotele choice-status, psychotele choice-status, and responses to the "Draw-a-Group" projective technique. In a repeated-measures design, the data were collected weekly for eight weeks, on a total of 104 subjects. The scores for each week were placed in rank order and all possible correlations were computed, using the rank order coefficient of correlation.

To test for reliability of the "Draw-a-Group" and symptom-severity scale, each judge's evaluation was correlated with the other two. The mean of the correlations was .69 for the "Draw-a-Group" and .46 for the symptom severity scale.
The coefficient of correlation between sociometric choice-status and mental health status was .38, which was significant at the 5 per cent level. It was concluded that the hypothesis was supported and that sociometry can be a valuable prognostic aid in a milieu therapy program.

The coefficient of correlation between sociometric choice-status and symptom-severity was -.21, which was not significant. It was concluded that the hypothesis was not supported although the trend was in the expected direction.

The coefficient of correlation between sociometric choice-status and the "Draw-a-Group" was .075, which was not significant. It was concluded that the hypothesis was not supported and the validity of the "Draw-a-Group" as a measure of interpersonal responsiveness is still in doubt. Additional data relating to the "Draw-a-Group" yielded a coefficient of correlation between the "Draw-a-Group" and mental health status of .38, which was significant at the 5 per cent level. The coefficient of correlation between the "Draw-a-Group" and symptom-severity was .02, which was not significant. It was suggested that further validity studies of the "Draw-a-Group" projective technique be conducted.

The coefficient of correlation between symptom severity and mental health status was -.33, which, although not significant, was in the expected direction.

A review of the literature reveals the need for more research on the use of sociometric data in psychiatric
hospitals. Although few in number, the studies reviewed indicate low to moderate support for the use of sociometry on psychiatric wards and clinics.

It is concluded that sociometry is a valuable prognostic method in a milieu therapy program and merits wider use and further investigation. It is concluded that the validity of the "Draw-A-Group" projective technique as a measure of interpersonal responsiveness was not supported; and, in view of conflicting evidence, further studies are suggested.
APPENDIX A

SYMPTOM SEVERITY SCALE

Considering only the present hospital population, please evaluate the following patients on the severity of observable symptoms. These should be considered as a whole but should include such items as behavioral immaturity, emotional instability, feelings of inadequacy, nervousness, compulsive behavior, etc.

SYMPTOM SEVERITY

1 = Slight
2 = Mild
3 = Moderate
4 = Considerable
5 = Extreme
APPENDIX B

Considering only the present hospital population, please rate the following patients on the status of their actual mental health (not symptoms). These should be considered as a whole but should include such items as adequate outlook and goals, ability to form close emotional bonds, effectiveness in dealing with others, social participation, satisfying work and recreation, etc.

ACTUAL MENTAL HEALTH

1 = Poor
2 = Fair
3 = Moderate
4 = Good
5 = Very Good
APPENDIX C

In the following questions you are to use the names of other patients. If you happen to know both, give their first and last name. Do not use the names of any of the hospital staff members.

You may name as many patients as you wish under each of the following questions, but do not use words like everyone or anyone, use real names.

1. Who would you most like to sit with at meals?

2. Who would you least like to sit with at meals?

3. Who would you most like to have with you in group therapy to work on personal problems?

4. Who would you least like to have with you in group therapy to work on personal problems?

How many times have you talked with your psychologist during the past week? The results of this questionnaire are kept confidential and you are asked not to show your answers to anyone else. The purpose of this questionnaire is to help plan certain elements of different individual therapy programs, group therapy, and aid in research on therapy.
Everything
MUST GO
used toys
can be a good alternative

pax lovely
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Unpublished Material
